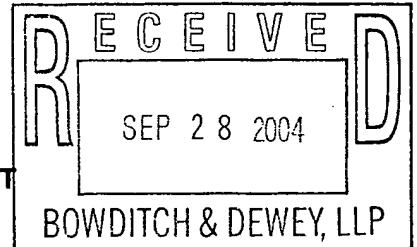


## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)



Applicant's or agent's file reference 301788.3002-103	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2004/003135	International filing date (day/month/year) 04/02/2004	(Earliest) Priority Date (day/month/year) 31/07/2003
Applicant  CAMBRIDGE POLYMER GROUP		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

**4. With regard to the title,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

**5. With regard to the abstract,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. With regards to the drawings,**

- a. the figure of the **drawings** to be published with the abstract is Figure No. 12

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/003135

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08J3/075 A61L27/16 C08F283/01

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08J A61L C08F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	US 2004/092653 A1 (BRAITHWAITE GAVIN J C ET AL) 13 May 2004 (2004-05-13) claims	1-180
X	US 6 268 405 B1 (SWORDS GREGORY ALAN ET AL) 31 July 2001 (2001-07-31) column 13, line 54 - column 14, line 6	1-180
X	US 6 231 605 B1 (KU DAVID N) 15 May 2001 (2001-05-15) claims; example 4	1-180
X	US 5 981 826 A (BRADDON LINDA G ET AL) 9 November 1999 (1999-11-09) claims; examples	1-180
	----- -/-- -----	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

14 September 2004

Date of mailing of the international search report

22/09/2004

Name and mailing address of the ISA

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Fax: (+31-70) 340-3016

Authorized officer

West, N

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/003135

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 700 289 A (GRANDE DANIEL A ET AL) 23 December 1997 (1997-12-23) column 9, line 56 - column 11, line 63 -----	1-180
X	US 5 578 217 A (UNGER PETER D ET AL) 26 November 1996 (1996-11-26) claims -----	1-180
X	US 5 541 234 A (UNGER PETER D ET AL) 30 July 1996 (1996-07-30) claims -----	1-180
X	US 5 502 082 A (UNGER PETER D ET AL) 26 March 1996 (1996-03-26) claims -----	1-180
X	US 5 494 940 A (UNGER PETER D ET AL) 27 February 1996 (1996-02-27) claims -----	1-180
X	US 4 753 761 A (SUZUKI MAKOTO) 28 June 1988 (1988-06-28) column 4, line 26 - line 48 -----	1-180
X	US 4 663 358 A (IKADA YOSHITO ET AL) 5 May 1987 (1987-05-05) claim 1; table 1 -----	1-180
X	US 4 524 064 A (NAMBU MASAO) 18 June 1985 (1985-06-18) example 2; table 1 -----	1-180

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2004/003135

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: —  
because they relate to subject matter not required to be searched by this Authority, namely:  

Although claim 132 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/003135

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2004092653	A1	13-05-2004	US 2004171740 A1	02-09-2004
US 6268405	B1	31-07-2001	AU 4694100 A	17-11-2000
			WO 0066191 A1	09-11-2000
US 6231605	B1	15-05-2001	US 5981826 A	09-11-1999
			US 2003008396 A1	09-01-2003
			US 2004143329 A1	22-07-2004
			US 2001029399 A1	11-10-2001
			AU 728426 B2	11-01-2001
			AU 7176698 A	27-11-1998
			CA 2288793 A1	12-11-1998
			EP 0991402 A1	12-04-2000
			JP 3506718 B2	15-03-2004
			JP 2001508690 T	03-07-2001
			JP 2003038637 A	12-02-2003
			WO 9850017 A1	12-11-1998
US 5981826	A	09-11-1999	AU 728426 B2	11-01-2001
			AU 7176698 A	27-11-1998
			CA 2288793 A1	12-11-1998
			EP 0991402 A1	12-04-2000
			JP 3506718 B2	15-03-2004
			JP 2001508690 T	03-07-2001
			JP 2003038637 A	12-02-2003
			WO 9850017 A1	12-11-1998
			US 6231605 B1	15-05-2001
			US 2001029399 A1	11-10-2001
US 5700289	A	23-12-1997	AU 7451596 A	07-05-1997
			EP 0862617 A1	09-09-1998
			WO 9714783 A1	24-04-1997
US 5578217	A	26-11-1996	CA 2206121 A1	06-06-1996
			CN 1167507 A ,B	10-12-1997
			EP 0795039 A1	17-09-1997
			JP 10510008 T	29-09-1998
			WO 9617095 A1	06-06-1996
US 5541234	A	30-07-1996	US 5494940 A	27-02-1996
			US 5502082 A	26-03-1996
			AT 168040 T	15-07-1998
			DE 69226203 D1	13-08-1998
			DE 69226203 T2	10-12-1998
			DK 625070 T3	22-02-1999
			EP 0625070 A1	23-11-1994
			ES 2118219 T3	16-09-1998
			JP 2620039 B2	11-06-1997
			JP 6511197 T	15-12-1994
			WO 9312877 A1	08-07-1993
			US 5525710 A	11-06-1996
US 5502082	A	26-03-1996	US 5494940 A	27-02-1996
			JP 8505431 T	11-06-1996
			WO 9512632 A2	11-05-1995
			US 5541234 A	30-07-1996
			AT 168040 T	15-07-1998
			DE 69226203 D1	13-08-1998

# INTERNATIONAL SEARCH REPORT

Information on patent family members

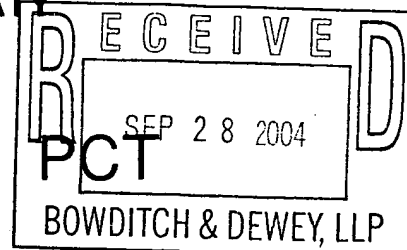
International Application No

PCT/US2004/003135

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5502082	A		DE 69226203 T2	10-12-1998
			DK 625070 T3	22-02-1999
			EP 0625070 A1	23-11-1994
			ES 2118219 T3	16-09-1998
			JP 2620039 B2	11-06-1997
			JP 6511197 T	15-12-1994
			WO 9312877 A1	08-07-1993
			US 5525710 A	11-06-1996
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US 5494940	A	27-02-1996	US 5502082 A	26-03-1996
			US 5541234 A	30-07-1996
			AT 168040 T	15-07-1998
			DE 69226203 D1	13-08-1998
			DE 69226203 T2	10-12-1998
			DK 625070 T3	22-02-1999
			EP 0625070 A1	23-11-1994
			ES 2118219 T3	16-09-1998
			JP 2620039 B2	11-06-1997
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US 4753761	A	28-06-1988	JP 1838374 C	25-04-1994
			JP 5062881 B	09-09-1993
			JP 63120702 A	25-05-1988
			US 4717800 A	05-01-1988
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US 4663358	A	05-05-1987	JP 1970360 C	18-09-1995
			JP 6078460 B	05-10-1994
			JP 61252261 A	10-11-1986
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US 4524064	A	18-06-1985	JP 58206751 A	02-12-1983
			EP 0095892 A1	07-12-1983
<hr/>				

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY



To:

see form PCT/ISA/220

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**  
(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2004/003135

International filing date (day/month/year)  
04.02.2004

Priority date (day/month/year)  
31.07.2003

International Patent Classification (IPC) or both national classification and IPC  
C08J3/075, A61L27/16, C08F283/01

Applicant  
CAMBRIDGE POLYMER GROUP

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

West, N

Telephone No. +49 89 2399-7582



WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITYInternational application No.  
PCT/US2004/003135

IAP20 Rec'd PCT/PTO 30 JAN 2006

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Box No. I Basis of the opinion

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/003135

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**Box No. II Priority**

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1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)

Yes: Claims

No: Claims 1-180

Inventive step (IS)

Yes: Claims

No: Claims 1-180

Industrial applicability (IA)

Yes: Claims

1-131,133-180

No: Claims 132

2. Citations and explanations

**see separate sheet**

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**Box No. VI Certain documents cited**

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1. Certain published documents (Rules 43bis.1 and 70.10)

and / or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

**see form 210**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2004/003135

1A20 RESEARCH 30 JAN 2006

Reference is made to the following documents (D):

- D1:** US-B-6 268 4051 (SWORDS GREGORY ALAN ET AL) 31 July 2001 (2001-07-31)
- D2:** US-B-6 231 6051 (KU DAVID N) 15 May 2001 (2001-05-15)
- D3:** US-A-5 981 826 (BRADDON LINDA G ET AL) 9 November 1999 (1999-11-09)
- D4:** US-A-5 700 289 (GRANDE DANIEL A ET AL) 23 December 1997 (1997-12-23)
- D5:** US-A-5 578 217 (UNGER PETER D ET AL) 26 November 1996 (1996-11-26)
- D6:** US-A-5 541 234 (UNGER PETER D ET AL) 30 July 1996 (1996-07-30)
- D7:** US-A-5 502 082 (UNGER PETER D ET AL) 26 March 1996 (1996-03-26)
- D8:** US-A-5 494 940 (UNGER PETER D ET AL) 27 February 1996 (1996-02-27)
- D9:** US-A-4 753 761 (SUZUKI MAKOTO) 28 June 1988 (1988-06-28)
- D10:** US-A-4 663 358 (IKADA YOSHITO ET AL) 5 May 1987 (1987-05-05)
- D11:** US-A-4 524 064 (NAMBU MASAO) 18 June 1985 (1985-06-18)

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Documents **D1-D11** all independently disclose methods for making a vinyl polymer hydrogel, wherein said method comprises (1) providing a solution of poly vinyl alcohol and (2) mixing said solution with a gellant, such as a salt, or a polysaccharide or even a second solvent which has a gelating effect. The methods of said documents disclose that gelating is either induced e.g. by cryotherapy at a certain level, i.e. e.g. by limiting the amount of cryo-cycles.

Consequently, present the subject-matter as presently claimed in claims 1-131 and 133-180 is not new (Article 33(2) PCT).

2. The applicant is requested to limit the number of independent claims to one per category.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2004/003135

3. Claim 132 relates to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of this claim (Article 34(4)(a)(I) PCT).
4. In order ensure that amendments do not contain subject-matter going beyond the content as originally filed, the applicant is requested to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based.

If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

**Re Item VI**

**Certain documents cited**

**Certain published documents**

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
US2004/0092653	13.05.2004	31.07.2003	02.08.2002